

# CERTIFICATE



PARTNER UNIVERSITIES



THIS CERTIFICATE IS PRESENTED TO

**Charles O.P. Marpaung**  
**Uras Siahaan**

WITH PAPER'S TITLE

"Impact of lockdown amid COVID-19 pandemic on energy consumption in residential buildings in Indonesia: An Index Decomposition Analysis"

TO CONTRIBUTE AS AN  
**AUTHOR**

**1<sup>st</sup> INTERNATIONAL CONFERENCE  
ON SUSTAINABLE ARCHITECTURE AND ENGINEERING  
Wednesday, 28<sup>th</sup> October 2020**

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